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HISTORY *Compliments of*
OF A *Thomas Layton*
M.D.P.

PHOSPHATIC CALCULUS

SPONTANEOUSLY EXPELLED THROUGH THE VAGINA

FROM A

CYST OF THE ANTERIOR VAGINAL WALL.

READ BEFORE

THE ORLEANS PARISH MEDICAL SOCIETY,

On the 24th June, 1878.

By THOMAS LAYTON, M. D. P.

Reprinted from
THE NEW ORLEANS MEDICAL AND SURGICAL JOURNAL
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HISTORY OF A PHOSPHATIC CALCULUS.

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From a Cyst of the anterior Vaginal Wall.

(Read before the Orleans Parish Medical Society on the 24th June, 1878.)

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On the 9th April, 1878, I was called to see Mrs. S., residing on Seventh street, near Constance, and was subsequently made acquainted with the following history: Mrs. S., is a native of New Orleans; she is now forty-nine years of age. She has been a widow since 1861. She bore nine living children in rapid succession, and had no miscarriages; she nursed all her children. She is a tall, larded limbed woman, of swarthy complexion, with dark hair and eyes. She is intelligent and a type of the Spanish Creole. Until lately, she was fleshy. Her menstruation has always been perfectly regular until three years ago. During her menstrual life, the flow was copious, lasting six or seven days every month. Up to about the time when this history begins, she had never suffered from any uterine or other disorder, with a single exception to be men-



tioned later, and, in a word, she considered herself a remarkably healthy person.

Towards the commencement of 1875, the interval between her menstrual periods began to lengthen, and the quantity of blood lost each time lessened perceptibly. This altered condition of menstruation was deemed natural both by herself and her friends, especially as it was attended neither by inconvenience nor sexual malady, and a year and a half ago, the menopause appeared to have been safely reached.

In the summer of 1875, she contracted intermittent fever, for which she was treated by a physician, with but indifferent success, for three months, at the expiration of which, she was counselled by her medical attendant to visit the sea shore, whence, after a stay of some duration, she returned cured of her malarial troubles.

Her health remained good, until the month of January of this year, when she began to suffer intensely from a pain in the left side, in the inferior costal region.

The physician, who had attended her in 1875, having died in the meanwhile, another professional gentleman saw her, and, according to her statement, diagnosed malarial enlargement of the spleen, for which, according to her statement again, she was blistered and purged, with the result of relieving the pain in about three weeks time, when the physician discontinued his services.

From this moment however, she began to lose flesh, and her friends noticed that her complexion was becoming pallid. The loss of flesh, although general, was more particularly visible about the abdomen and hips, which, from a condition of previous fullness and firmness, became shrunken and flaccid.

During the month of February, she felt pains in the abdomen, which frequently became enlarged, and at the same time, she experienced a sensation of weight in the pelvis, whilst in the act of walking. The abdominal pain was referable to the inferior portions of the cavity, with perhaps a tendency to localization over the site of the right ovary. With regard to

this last point however, her recollections are not absolutely positive.

Acting upon the advice of her friends, she concluded to visit a midwife living in the Second District of this city, because it was suggested that her condition might be due to uterine cancer. The midwife examined her with a speculum, on the 11th of March, and assured her of the non-existence of cancer, but affirmed the existence of inflammation and extensive uterine ulceration, whose curation was declared to be quite feasible, under a course of cauterization. This, Mrs S. consented to, and visited her nine times, being cauterized twice a week. The cauterizations were severe and followed by pain, loss of blood and the passage of a substance compared to pieces of flesh or skin.

Mrs. S. and her niece, an intelligent lady, who was present at these cauterizations, say they were informed by the midwife, that nitrate of silver (probably in stick form) was the caustic employed. The remainder of the treatment consisted in baths and vaginal injections with a decoction of poppy heads.

After the ninth visit to the midwife, and after the eighth cauterization, Mrs. S. was seized with an attack of acute dysentery which confined her to bed, and compelled her to suspend the treatment detailed above. I was sent for on the 9th April, to attend the lady in her attack of dysentery, which proved tractable, yielding readily to the therapeutic measures adopted. Upon becoming convalescent, the patient apprized me of the foregoing facts in her history, and desired me to make an examination of her womb. I declined doing this, because she was under the charge of the midwife, and withdrew.

Shortly after, I was again sent for, and informed that the midwife's further services had been dispensed with, and upon renewed solicitation, I decided upon making a digital examination, as I had come unprovided with instruments.

On introducing the finger, instead of meeting with a cervix, more or less conical, and projecting to a greater or less extent into the vagina, I found a cavity with sharp, wiry edges,

not unlike the condition frequently offered by the os during labor. In a word, the infra-vaginal portion of the cervix had entirely disappeared, and the sharp, wiry edges mentioned above were formed by the junction of the vagina and uterine substance. The diameter of the orifice of the cervical cavity was about equal to that of a twenty-five cent piece. The index penetrated for some distance into this cavity, which was conical, and whose walls were rugous, or lined with granulations breaking down easily under the finger. The body of the womb was enlarged and in a moderate state of antever-sion, still it did not appear to have contracted adhesions, as the entire organ was mobile. The uterus was judged to have attained an enlargement corresponding to the growth noticed after three months of pregnancy, because the fundus could be distinctly felt above the symphysis pubis.

On withdrawing the finger from the cervical cavity just described, for the purpose of carefully exploring the vagina, a number of indurated spots were discovered apparently infiltrated into the vaginal walls and forming an interrupted circle around the vagina at a point estimated to be probably not less than half an inch, and not more than three-quarters of an inch below the vaginal insertion. This broken, nodulated circle appeared to be upon an oblique plane, the anterior segment of the circle being perhaps a little lower than the posterior. The indurated spots produced a sensation of thickening; they were flat, and did not seem to offer a greater diameter than that of a pea, except upon the posterior and anterior walls, as will be described, and the interrupted circle alluded to was formed of perhaps six or eight of these nodes. The induration upon the posterior wall was diffuse and seemed to extend upwards to the cervix, with whose sub-stance it became fused.

The induration upon the anterior wall of the vagina was the most prominent of all, its projection into the vagina being of about the size of a green pea.

Upon the withdrawal of the finger, no odor was detected, but it was found to be bathed in a sanguous fluid, which also trickled from the vulva.

The patient's attention being called to this discharge, she stated that from about the time the midwife had begun to cauterize her, she had observed her linen to be stained by a liquid, whose appearance she likened to that of water, in which raw meat had been washed.

The day following; I returned to Mrs. S.'s residence, taking with me different specula.

Upon applying Sim's instrument, I was struck with the pendulous, flaccid condition of the abdominal tissues, which hung down in folds, like the skin of a rhinoceros. This flaccidity had not escaped the notice of the sufferer, who reiterated her previous statement, concerning its recent occurrence.

I obtained a good view of the parts, and saw what my finger had detected the day before.

The indurated spot upon the anterior vaginal wall was distinctly visible, resembling a teat of flesh or conical granulation, whose apex, directed towards the vaginal cavity, was ulcerated, as though denuded of epithelium. The vagina below the zone of indurated spots was of a delicate pink hue, and furnished no secretion, being in contrast with the cavity described as existing in the cervix, from which a small quantity of the sanious fluid, already alluded to, was trickling. The diagnosis did not seem to admit of much doubt, the age of the patient, the destruction of the cervix, and the sanious fluid noticed, as well as the existence of the indurations of the vaginal wall, apparently pointing to cancer.

The prognosis was however held in reserve, and a guarded opinion expressed, because, in the first place, the repeated cauterizations, the lady had undergone, were recent, and although it was hardly possible that the destruction and indurations were the result of injudicious action on the part of the midwife, still such a result might have followed the employment of caustics by her, and in this event, time would prove an important factor in bringing about a solution of the difficulty.

In the second place, careful inquiry into hereditary influences in the family of the patient failed to develop any history of cancer or gout. (It is useful to say in this place, by way of

parenthesis, that the mention of gout is introduced, with the view of subserving future purposes.)

Mrs. S., was the ninth child, and was a few months old, when she lost her mother, who died, at the age of forty-seven years, according to family tradition, from the rupture of an internal abscess due to an injury received whilst lifting a heavy tub. Her father died suddenly in his eighty-first year.

For obvious reasons, the treatment recommended was expectant, and generous diet was insisted upon.

I did not see the case again for several days, when upon introducing the finger, the condition of the parts was found to have undergone no material change, except, that the teat of flesh, which has been described as being situated high up on the anterior vaginal wall, was noticed to have become enlarged, and to have attained fully the size of a red bean. Careful exploration with the finger revealed the fact, that a hard substance, upon which the nail grated, and which was mobile, appeared to be working its way through the apex of the teat, coming into the vagina, from the direction of the bladder.

Being much surprised at this unexpected event, I inserted a Sim's speculum, and the increased size of the teat was plainly visible, and a dark colored body was also distinctly seen protruding from the apex into the vagina, perhaps to the extent of a quarter of an inch. (The mensuration is however, of course, only approximative.)

Not being provided with a female dressing forceps, the speculum was withdrawn, and an attempt was made to enucleate this strange product with the finger. Although mobile, it could not be dislodged, and the endeavor was abandoned, owing to an annoying hemorrhage which occurred.

The patient and her niece were informed that something in the shape of a hard body might pass through the vulva, and they were instructed to be on the look out, and carefully preserve it, in the event of its transit.

Circumstances prevented my seeing the patient for nearly a week, when I received a visit from her niece, who informed me, that, on Friday, May 17th, on the second day after my last visit, Mrs. S., whilst using the vessel had felt something pass through

the labia, and had heard the noise produced by its fall upon the bottom of the vase.

The ladies at once examined the urine and removed the stone, for such it was, which I received from my visitor.

I inquired, if there had been, at any time since its passage, dribbling of urine through the vagina, and was given a negative reply.

I examined the stone carefully. It was regularly ovoid, and presented somewhat the appearance and shape of a large spanish olive.

Its length was one inch, and its greatest diameter was sixty-eight one hundredths ($\frac{68}{100}$) of one inch. (I will say here, by anticipation, that the above mensuration was kindly made by Professor Joseph Jones.)

I weighed the stone, and found its weight to be seventy-six (76) grains Apothecaries' weight.

It was of a dark color, and, in spots, its surface resembled that of a mulberry.

No odor was detected.

At the smaller of its extremities, a circular portion of the outer layer or crust had been fractured, apparently as the result of its fall upon the bottom of the vessel. Inspection of the fractured spot showed an external layer of whiteish hue, which in places was very thin, and elsewhere measured from $\frac{3}{16}$ to $\frac{1}{8}$ of an inch in thickness. This external layer could be compared to a cement destined to fill up interstices, and give the stone its generally regular ovoid shape.

The same external layer, too, was enveloped in a thin coating of dried animal matter and clotted blood, which doubtless caused the dark color of the outer surface mentioned above.

The whiteish substance just described was friable and excentric to another and more deeply shaded stratum plainly visible at the bottom of the fracture.

I visited Mrs. S. at the earliest opportunity. Examination showed that the parts had undergone no change of condition, except that the teat upon the anterior wall, through which the stone had passed, was lessening in size.

I passed a catheter into the bladder, in which careful explora-

tion failed to reveal the presence of any concretion. An attempt was then made, with the finger in the vagina to establish communication, through the teat, with the catheter in the bladder. No success attended this endeavor.

I purposely refrained from having a chemical analysis made, before presenting the calculus for inspection to the members of the Orleans Parish Medical Society, which I did at the meeting held on the 27th May, 1878, on which occasion I reported the case orally. It was then decided to commission me to submit a written report, which would form a subject for discussion at the next regular meeting of the society.

This paper is the desired written report, which I supplement with a statement of the results furnished by a chemical analysis of the product, kindly made in my presence, in his laboratory, by Professor Joseph Jones, to whose courtesy and valuable assistance I wish publicly to render thanks.

The remaining history of the case, to date, may be briefly summed up as follows: May 31st; the patient has had fever and pain in the lower part of the abdomen since yesterday. Green matter vomited to-day. Bowels loose. The os still presents the same wiry condition: the uterus is hard and heavy, the vaginal nodes are less marked. The lady's garments show pinkish stains.

June 3d: Fever; vomiting of grassy green matter continues,

June 5th: This morning, whilst urinating, there occurred a sudden gush of blood referred to the vagina.

June 7th: Grass green matter vomited again. No repetition of the hemorrhage. Vaginal exploration reveals two small liquid cysts on the anterior lip of the os. The nodules have almost entirely disappeared, and the anterior elevation, through which the calculus escaped, has completely subsided, leaving no perceptible induration. On the posterior vaginal wall there exists a hard band, conveying the impression of cicatricial tissue, which runs up to and is finally lost within the cervical cavity. The uterus is anteverted and the os directed towards the concavity of the sacrum. The mouth of the womb is puckered. The cavity of the cervix appears to have become

smaller. It is certainly less fungous. There is no odor, and the finger is withdrawn without any traces of blood. The edges of the os have still the same sharp feel, and the inferior segment of the uterus is perceptibly indurated. The abdomen is tender at night, but there are no lancinating pains. Mrs. S. generally rests well under the influence of an opiate. She is feeble and complains of want of appetite.

June 18th: Fever for three days past: pain in region of spleen and lower part of abdomen. spleen not enlarged. Pinkish stains upon garments: little or no appetite. nausea. Examination by speculum reveals an ulceration of about the size of a pea. on the anterior lip and extending into the cavity of the cervix. The os is softer and more oedematous. and the cervical cavity seems smaller and smoother. From the ulceration on the anterior lip, a thin stream of blood flows down into the vagina. The uterus is anteverted. The sound passes readily to a depth of at least three inches. The vaginal nodes have all disappeared, but the posterior cicatricial band, already described, is still to be felt. The sound, on being withdrawn from the cavity of the uterus, was noticed to be covered with a sanious liquid. The vagina contains a mucous, viscid secretion. The removal of the speculum is followed by the appearance of a citrine fluid at the vulva.

REMARKS.

Although this case, in its original features, presents a good field for a differential diagnosis between uterine cancer and destructive lesions, which may have been produced by a mid-wife, and although the discussion of these points is interesting, yet my intention is to pass by, unnoticed, this aspect of the history related in the preceding pages, in order to take up the study of the strange body, whose unexpected appearance excites a more absorbing curiosity, as a matter of scientific rarity.

A stone is observed to make its way through the vaginal wall into the vagina, coming apparently from the bladder.

Whence did it originate?

Three suppositions might be entertained.

First: this stone is an ordinary vesical calculus.

Second : it is due to some foreign substance introduced for various purposes. Let me say at once, for the sake of brevity, that the facts in this case allow no room for entertaining this second supposition, which may therefore be dropped from further consideration.

Third : the production under examination has originated in a cyst of the vaginal wall.

To return then to the idea first enumerated. The thought would naturally arise, that the calculus had worked its way from the bladder to the vagina.

Here are the reasons, for which this supposition must be laid aside, as untenable.

It will be remembered, that no gouty antecedents were discovered in the family history of Mrs. S. Of course, it will be understood, that, for obvious reasons, very little stress is laid upon this absence of any known hereditary influence.

Stronger negative grounds can be brought forward.

It will be remembered too, that with the finger in the vagina and the catheter in the bladder, no communication between these parts could be detected.

There has never been any flow or dribbling of urine through the vagina. This of itself is a very strong argument.

T. Gaillard Thomas says (1) at page 154: "An involuntary flow of urine usually announces the existence of a fistula within three or four days after delivery, though when it is the result of injury inflicted by instruments employed in delivery, it may occur immediately. On the other hand, the separation of the slough.....may not take place until much later....."

He then relates instances in which the symptoms of fistula were not manifested until after a month, on the twenty-second day, after twenty-nine days, and on the twenty-first day.

In the case now being considered, the longest of these limiting periods has been exceeded, and the urine has never passed, except through its natural channel.

In Fleetwood Churchill's Practical Treatise of the Diseases of

(1) Thomas on the Diseases of Women.

Women (2), I find the following at page 881, which I render into English, from the French translation of Wieland and Dubrisay, not possessing a copy of Churchill's work in the original English: "The signs of vesical fistulae are not numerous, for besides the physical signs of the lesion, the only rational symptom consists in the flowing of urine, not through the urethra, but through the vagina."

It is not deemed necessary to adduce additional authorities upon this point.

Finally, the analysis of the stone enables me to state positively that it did not come from the bladder.

The calculus was analyzed in my presence by Professor Joseph Jones on the 6th June.

It was very hard in its central parts, and considerable time was required to saw through its mass.

Prof. Jones kindly wrote me a letter, of which I give a copy, detailing the results of the analysis.

" MEDICAL DEPARTMENT UNIVERSITY OF LA.,
June 6th, 1878.

THOMAS LAYTON, D. M. P.

" Dear Sir—In reply to your request, I have made a section and chemical analysis of the small calculus which you extracted from the anterior vaginal wall of Mrs. S., now under your care. The calculus has a central nucleus with surrounding rings. The central portion is firm, cutting with difficulty by means of the metacarpal saw.

" Chemical examination: soluble in nitric acid; ammonia throws down small flocculent deposits of magnesian phosphate. " Molybdate of ammonia, heavy yellow deposit showing presence of phosphoric acid. Solution of acetate of soda in acetic acid with perchloride of iron, heavy deposit of phosphate of iron. " Oxalate of ammonia, heavy deposit of oxalate of lime.

" Tests for uric acid with nitric acid and ammonia gave no reaction characteristic of uric acid. *No murexide present.*

" All the tests as well as the appearance of the calculus and its physical properties indicate that it is nothing more nor less

(2) *Traité Pratique des maladies des femmes par Fleetwood Churchill. Traduction de Wieland et Dubrisay ; Paris, 1866.*

"than the phosphate of lime. In my opinion, it is analogous to prostatic and salivary calculi.

"Respectfully,

"Your obedient servant,

"(Signed)

JOSEPH JONES, M. D.

"Professor Chemistry and Clinical Medicine."

I take pleasure in showing you *three* different specimens of the calculus.

The powder is the remainder of the dust obtained by sawing through the stone.

A part of this powder was employed by Dr. Jones in making the chemical analysis detailed above, because it was considered, that this dust, obtained by sawing through the calculus, represented a fair average of its composition.

A portion of the calculus has been preserved *in its original condition*, as obtained by me from Mrs. S.

Owing to the hardness of the centre and its disposition in concentric layers, I took *this third specimen* to Messrs. Griswold & Co., who had the courtesy to have it polished, with the result, which is submitted for your inspection to-night. The polished portion of the calculus represents an irregular, truncated, six sided pyramid. Examined with a magnifying glass, a regular mosaic is revealed, the mass being formed of a number of stones of different sizes, closely grouped together, and firmly imbedded in a kind of mortar or cement, which infiltrates itself into all the chinks and interstices between the small stones, and is composed of the same external layer of whiteish hue already described as giving the calculus its generally regular ovoid shape. Examined isolatedly with the glass, each of these smaller stones is found to offer one or more nuclei encircled by concentric wavy strata similar to the rings in the trunk of a tree. Under the glass too, these smaller stones very much resemble the thin horizontal sections of grape vine stems, which are prepared as specimens for the microscope.

Viewed by the base of the pyramid, the polished portion of the calculus appears to be formed by a number of vertical bundles wedged together and held fast by the ubiquitous

cement which has been described. An idea of the disposition of these calculous bundles may be conveyed, by saying that the manner in which they are grouped together is not unlike the appearance of bundles of muscular fibre seen under the microscope.

A decision having therefore been reached, that this stone did not come from the bladder, the process of elimination or exclusion, adopted at the beginning of this study, leaves but one gate open, viz: "the production under examination has "originated in a cyst of the vaginal wall."

Let me say at once, that careful research into the special literature of the subject developed but meagre results. Nowhere among the—it is true—relatively speaking limited facilities at my disposal, have I been able to find any mention made of a calcareous production obtained from a cyst of the vagina, which appears itself to be of rare occurrence.

True, Van Swieten, in his Commentaries, has at page 183, Vol. V, a chapter on "Calculus," (3) in which he says (translation mine): "There is scarcely any part of the body, as will "appear from the following pages, in which a calculus has not "sometimes been found: whence it appears, that the material, "from which the calculus grows, is present in the whole body, "or at least, that it is conveyed throughout the entire body."

In the same volume, lower down, we find the following, at page 193. (4) "The engendering of a calculus is successive, "not taking place all at once, as Helmontius claimed, who "believed, that, in one instant, a calculus, and a large one "too, might be formed by a certain petrifying spirit pervading "the whole system, which might produce the same effect, as that "which has furnished the poets with the fable of Medusa's "head."

Still further on, in the same volume, at page 203, Van

"(3) Gerardi Van Swieten, Med. Doct. Commentaria in Hermanni Boerhaave aphorismos &c. Parisiis MDCCCLXXXIII. "vix ullus, ut patet in sequentibus, locus corporis est. ubi non fuit inventus aliquando calculus: unde videtur materia, ex qua calculus concrescit in toto corpore adesse, vel saltem per totum corpus deferri." Tomus Quintus. p. 183.

(4) "Ibid: p 193. "Successiva ergo est calculi generatio non momentanea uti Helmontius voluit, qui credebat, uno momento calculus, ac magnum quidem, formari posse a spiritu quodam petrifice pervadente omnia, quique eundem effectum produceret, ac de Medusa capite Poetae fabulati sunt."

Swieten relates that Hippocrates mentions a stone, which was expelled from the uterine cavity of a woman sixty years of age.

He also states that *Louis* had collected the histories of several cases of uterine calculi.

It would seem as though Louis was rather sceptical concerning Hippocrates' story, told in brief above, and whilst not venturing to openly impugn that hoary and venerable authority, still he, with a certain degree of timidity, doubtless consequent upon a sense of his audacity, undertakes to hint that the stone in question may have come from the bladder and not from the womb.

Van Swieten however, shocked at the temerity displayed by doubting any assertion made by the Father of Medicine, clings to the Hippocratic version, because, as he gravely asserts. Louis does not seem to have based his opinion upon very substantial arguments, and with this dignifiedly withering rebuke, unlucky Louis' dissenting interpretation is dismissed as unworthy of further consideration.

Next in order, the great commentator quotes a case communicated by the "very celebrated Gaubius" to a society at Haarlem in Holland, in which a virgin, aged twenty-eight years, suffering from falling of the womb, passed a large number of uterine calculi in the space of a few years. These calculi, according to Gaubius, were like chalk.

Van Swieten then alludes to calculi found in the uterine annexes, and concludes by saying, at page 204 (5): "I believe "that these instances are evidently sufficient to demonstrate "that scarcely any spot can be found in the human body, in "which a calculus has not sometimes been discovered. I "might easily enumerate additional facts: (for Medical History "abounds in such). Stones, forsooth, have been found in the "mouth, the tongue, the nostrils, the ears, the liver, the spleen "etc., but lest I should dilate too lengthily upon all these, it "will suffice to have pointed them out summarily."

(5) *Ibid.* p. 204. "Haec puto sufficere, ut constet, vix loca in corpore humano reperiri, "in quibus non fuerit aliquando inventus calculus. Plura facile recensere potuissent: " (Historia enim Medica in his dives est.) Fuerunt enim calculi inventi in ore, lingua, "auribus, hepate, liene etc., sed ne nimis in his longus sim, summatione haec monuisse "sufficit."

The existence of vaginal cysts being admitted, perhaps on account of self-evident analogy, it may be useful to recall an observation of Sir Astley Cooper (6) who says that he once saw an atheromatous or melicerous cyst which had undergone ossification.

Dr. A. B. Miles, Assistant House Surgeon of the Charity Hospital in this city, has kindly taken an interest in the history of the case presented to you this evening, and he informs me that at page 170 of Green's Pathological and Morbid Anatomy, under the head of secondary changes in cysts, it is said that: "calcification and ossification of the wall may also occur...." "Calcification of the contents is also common."

Dr. Miles also called my attention to the fact, that in Gross' System of Surgery, Vol. II, p. 947, an account of vaginal cysts is given. The contents were liquid however.

Dr. Miles, to whom I am indebted for the foregoing authorities, also undertook to examine a file of the Transactions of the London Obstetrical Society.

He mentions finding in Vol. IX for 1867, the history of a cyst of the anterior vaginal wall, with fluid contents. The case was reported by J. Hall Davis, M.D., F.R.C.P. Dr. Davis states that on two occasions Dr. West met with vaginal cysts containing fluid, and that Seanzoni also opened a vaginal cyst, whose contents were liquid.

It is needless, for present purposes, to call attention to the fact, that all the books allude to Nabothian cysts and to those of Bartholin's glands.

The fact that purely vaginal cysts are uncommon is patent from the number of authors, who, in their writings omit even mentioning the existence of such tumors. For instance, neither Marion Sims nor T. Gaillard Thomas appears to consider the matter worthy of the slightest attention.

Some of the medical dictionaries also, such as Nysten and Dunglison, do not devote a passing allusion to the subject.

Broca in his "Traité des Tumeurs," (7) Vol. II, p. 115,

(6) *Œuvres Chirurgicales complètes de Sir Astley Cooper. Traduction de Chassaignac et Richelot. Paris, 1837, page 590.* A copy of the English edition is not in my possession.

(7) *Traité des Tumeurs par Paul Broca, Paris, 1869.*

speaking of cysts formed around inert and solid bodies, says (translation mine): "Such cysts may be compared to those "which sometimes surround certain concretions formed in the "tissues, and due to the deposit of non-organized matter (cre- "taceous tubercles, stony concretions, etc). Besides, as these "concretions are always deposited very slowly, they are very "often deprived of a cystic envelope, and they are directly in "contact, or even in continuity with the surrounding tissues ; "whence arose the ancient idea, that they were due to the "petrifaction of such tissues."

In a number of works upon obstetrics, we read of cysts of the vagina which impeded labor. All the accounts of such cysts, which I have had occasion to examine, refer to tumors, whose contents were fluid.

Churchill (8), in his treatise of the diseases of women, already quoted, writes as follows, page 141: "*Encysted tumors of the vagina.* I have never met, in the books, with any description of this disease. I do not believe it to be very common. I will therefore be the more excusable in giving details here concerning the four cases which I have seen." All four were cysts with fluid contents.

In Graily Hewitt's work (9) on the "Diseases of Women," at page 192, I find the following: "Dr. West relates a case, "in which a cyst of the vagina, the size of an egg, projected "from between the vulva, and had just the appearance presented by a prolapsed bladder. By the use of the catheter, however, the nature of the tumour was made evident." Lower down, at page 194, Graily Hewitt remarks that: "These cysts (vaginal) are not common; they could hardly be confounded with any thing else..... they probably consist of enlargements of the mucous follicles. It is more difficult, however, to distinguish the next series of cases,—those in which a hard fibrous tumour of the vagina is found growing external to the canal, but projecting partly into it—from some other conditions. Occasionally fibrous tumours, resembling the

(8) *Traité pratique des maladies des femmes.* par Fleetwood Churchill. Traduit par Wieland et Dubrisay, Paris, 1866.

(9) *The Diagnosis and Treatment of Diseases of Women,* by Graily Hewitt. M.D. Lond. M. R. C. P. London, 1863.

“fibrous tumours of the uterus, grow in the vaginal wall, “originating primarily in the uterus according to Kiwisch, “but sometimes also primarily in the vaginal wall itself, according to Scanzoni.”

In a short paragraph, at page 1036, entitled : “*Kystes et Polypes du Vagin*,” (10) Professor Courty of Montpellier, writes the following, which I translate : “Cysts are only exceptionally observed in the vagina. Those of the superior and inferior parts are furnished by the uterus and the vulva, and offer the appearance of follicular cysts. Those of the middle region, or of the vagina properly speaking are due to the development of serous bursæ, or to the formation of cysts, whose primitive location is in the peri-vaginal cellular tissue (Rokitansky), and whose development gradually, although often very slowly, causes the cyst to project into the vagina, that is to say, towards the point where the least obstacle is offered to the growth of the tumor. Incision of the cyst, evacuation of its serous contents and cauterization of its cavity are sufficient to obtain a cure.”

Nelaton, in his *Surgical Pathology* (11), Vol. V, page 823, treating of deep follicular cysts of the vagina, writes as follows (translation mine) : “They are observed in the upper half of the vagina and in the neighborhood of the cervix uteri; they generally occupy the anterior wall of the vulvo-uterine canal. Two cysts of this kind are seldom found in the same patient; The matter contained in these pouches is viscous, ropy and reminds one of mucilage.”

The most satisfactory contribution to the literature of vaginal cysts, I have met with, is to be found in the report of a case related to the New York Obstetrical Society, by Dr. Paul F. Mundé, editor of the “*American Journal of Obstetrics*.” The history of Dr. Mundé’s case is published in the *American Journal of Obstetrics* for October, 1877. (12) The patient, a

(10) *Traité pratique des maladies de l’utérus et de ses annexes*, par A. Courty, Paris 1866

(11) *Éléments de Pathologie Chirurgicale*, par A. Nélaton, Paris, 1859.

(12) *Transactions of the New York Obstetrical Society*, in *American Journal of Obstetrics*, October, 1877, p. 673, et seq.

Mrs. B. McD. had a cyst of the anterior wall of the vagina, with "clear glutinous contents." Dr. Mundé's report on this occasion is supplemented by the following interesting remarks which I transcribe: "The number of cysts of the vagina reported in literature is by no means so great, that the publication of a new case may be considered superfluous. Up to the appearance in 1871 (Arch. für Gynäkologie, II) of a paper on this subject by Winckel of Dresden, in which the first full account of the literature, etiology, pathology and treatment of these growths was given, only fifty cases of true vaginal cyst had been reported, including four related by Winckel in that paper. Since then only two papers have appeared, one by Kaltenbach of Freiburg (Arch. f. Gyn., V., 1873), chiefly the report of a case, and the other by Von Preuschen, (Centralbl., 40, 1874) who found glands in the vagina, and attributes the cysts to the occlusion and dilatation of these glands. (13).

"One case has also been reported (Am. Jour. Obst., Vol. IX, 1876) by the late Dr. Brainard Hunt of this city. "Doubtless other cases have been observed and reported, but "have escaped my notice in the superficial review I have been "able to give of the matter. T. Gaillard Thomas does not "mention the disease at all in the latest edition of his book, "and Shroeder devotes but two pages to its very imperfect "description. In view of this scarcity of literature, and the "comparative rarity of the affection, it may not seem inappropriate to refer briefly to the conclusions arrived at by Winckel. "He found that the cysts generally occur singly (in 82 per cent.), "more rarely two (12 per cent.), and still less frequently, three "cysts (4 per cent.), are found at a time. Kiwisch found five in "one case. As a rule, the cysts are located on the anterior "(19 cases), or posterior (14) wall, more rarely laterally (5). "On the anterior wall, the lower third and junction of middle "and upper third are the favorite seats; on the posterior wall "the lower and middle thirds. In two-thirds of the cases, the

(13) It may not be out of place here, to mention that Robin and Littré, in their 11th edition, p. 1454, denied the existence either of glands or of follicular orifices in the vaginal mucous membrane. T. L.

"cysts occurred in the lower half of the vagina. The size of "the cysts varied from that of a pea or nut (25.5 per cent.) to "that of a hen's egg or pear, or larger (34.09 per cent.), the "larger proportion being of medium size, pigeon's egg (40.4 "per cent.). The contents of the cysts varied greatly, being "reddish, brown, green, slimy, glutinous, albuminous, but "generally of clear yellow color and serous consistency. An "analysis shows albumen, salts and water, epithelia, granulated "cells, fat globules, and, in those with colored contents, pig- "ment and blood corpuscles.

"There are four varieties of vaginal cysts, differing in origin "and constitution of their envelopes.

1st. "Simple follicular cysts, superficially located in the "mucous membrane, with a thin envelope, containing only "fibro-elastic tissue and lined by pavement epithelium.

2d. "Cysts caused by a dilatation of lobulated glands (found "by Henle in exceptional instances in the upper portion of the "vagina and the cervix) with thin walls, no endothelium, and "always small in size.

3d. "Cysts, whose walls consist of the mucous membrane, "and at least a portion of the fibro-muscular coat of the "vagina; these cysts have no special capsule, but are found "merely by a separation of the strata of the vaginal wall "by an effusion, and occur chiefly in the lower third of the "canal.....

4th. "Cysts in the perivaginal cellular tissue, with separate "walls and *varied contents (cheesy, dermoid)*, (14) which grow "down into the perivaginal space, and push the whole wall of "the canal before them.

"Briefly, these four varieties may be divided into three "groups; *a*, mucous cysts, arising from closed or open "follicles; *b*, interstitial cysts, located in the sub-mucous or "fibro-muscular layer; and *c*, the sub-serous situated above, "under the peritoneum; below, between rectum and vagina.

"Of the fifty cases, the majority come under class *b*, inter- "stitial, about 66 per cent. being found below the middle of

" the vaginal canal, a portion, where even those authors who
 " claim positively to have found glands in the vaginal mucosa,
 " admit their absence.

" The etiology of these cysts varies. That of the follicular
 " cyst is probably to be sought in chronic catarrh and inflamma-
 " tion of the vaginal mucous membrane, and in the physiologi-
 " cal hyperemia occurring during pregnancy. The interstitial
 " cysts probably arise in consequence of pressure, contusions
 " and extravasations during parturition. (15.) Still, of the
 " fifty cases collated, only eight were parous women, and two
 " were undoubtedly virgins, one being a newborn child. The
 " rarity of the cysts in the lateral portions of the vagina
 " certainly does not speak in favor of Veit's opinion, that
 " they originate in a persistence of the Wolffian bodies; or
 " possibly the lower ends of Müller's ducts may remain patent,
 " and occasionally be the starting point of vaginal cysts.
 " Strains and local injuries irrespective of childbirth are
 " recorded as causative agents in several cases, and Verneuil
 " believes in the occasional formation of bursæ mucosæ in the
 " recto-vaginal septum."

To the above record, I will add the following: A few years ago, I was invited by *Dr. Just Touatre*, of this city, to see a case of cyst of the posterior vaginal wall. The contents were liquid, and the tumor was so voluminous as nearly to obliterate the vagina.

Dr. Touatre informs me that he has since had another case of vaginal cystic tumor, occurring this time, on the anterior wall, about one inch above the vulva. The patient suffering pain, during intercourse, from this tumor which was somewhat larger than a walnut, consulted a druggist of her acquaintance.

On discovering the tumor, he proceeded to open it with a

(15) It seems to me that the calculus, whose history forms the subject of this paper, must have originated in an interstitial cyst, and it will be remembered, that Mrs. S. gave birth to nine children. It is true, her last child was born before 1801, but this fact would not necessarily invalidate the hypothesis adopted, because the stone obtained from the vagina of Mrs. S. is evidently *not of recent formation*, and we have no means of determining any thing like the exact age of a production of this nature. It is therefore not irrational to suppose that the interstitial cyst, whence it came, may have had its origin in pressure sustained during parturition. The stone, once formed, may have lain dormant for years, until the recent cauterizations, described as having been made by the midwife, producing inflammatory action, may have proved the immediate cause of its expulsion.

knife, making a free incision, and this operation was followed by the escape of a clear liquid. The druggist then cauterized the interior of the pouch with solid nitrate of silver. The liquid did not collect again, but the patient did not get well. The interior of the tumor became transformed into a pyogenic membrane, which suppurated freely, and coition became so painful, that the woman applied to Dr. Touatre for relief. The nature of the morbid condition having been ascertained, Doctors Touatre and Souchon dissected out the cystic sack, and the case made a speedy and permanent recovery.

Dr. Touatre has had the politeness to write me, that, in a medical work in his library, he has found reference made to a memoir by Huguier entitled: "Kystes sous muqueux du vagin." (16.) Unfortunately, neither Dr. Touatre nor I have been able to consult this memoir of Dr. Huguier. Still, as it dates back to 1847, it is hardly likely, that if it mentioned cases resembling that of Mrs. S., these would have been allowed to remain buried in oblivion during so many years.

The name of Dr. Huguier and the interest attaching to everything emanating from his authoritative pen suffice to render this supposition plausible, to say the least.

It will be remarked that an important difference exists between the vaginal cysts mentioned by the authorities, whose writings have been passed in review, in the preceding pages, and the case of Mrs. S.

Nowhere, in the literature of the subject, do we find even a hint thrown out of any vaginal cyst, whose contents were calculous, as in the instance I have the honor to report to-night.

True, Dr. Mundé, in the instructive article quoted above says that the contents of some cysts in the perivaginal cellular tissue are cheesy or dermoid, but he makes no mention of ever having heard of a calculous production in such conditions. It will be remembered that I have, in the course of this paper, quoted Sir Astley Cooper as saying that he had once seen an atheromatous or melicerous cyst, which had undergone ossification.

Bearing in mind, also, the extract from Green's *Pathological*

(16) Huguier: *Kystes sous muqueux du vagin*; in *Mémoires de la Société de Chirurgie de Paris*, Vol. I, in qto. 1847, p.p. 396—394.

and Morbid Anatomy (to be found higher up), in which, under the head of secondary changes in cysts, the author says: Calcification and ossification of the wall may also occur "Calcification of the contents is also common" (17), it appears to me, that the following question may, without scientific impropriety, be asked: does it require a great stretch of the imagination to suppose that the stone obtained from the vaginal wall of Mrs. S., may represent the ossification or calcification of the cheesy or dermoid contents of a cyst corresponding to the description given above by Dr. Mundé?

I am indebted to the courtesy of my friend Dr. J. C. Carter, for the perusal of the article on "Cysts of the Vagina," which is to be found at page 506, Vol. X, of Von Ziemssen's Cyclopaedia of the Practice of Medicine. This having been lately published (1875) may be supposed to convey all the information that is to be had, concerning the question under examination. The article is by Schroeder, and strikes me as being the one alluded to by Dr. Mundé, in his report quoted above. It is based upon the following authorities: "Heming, Edinburgh Medical Journal, January, 1831. Ladreit de la Charrière. "Archives Génér. 1858, Vol. I, p. 528. Säxinger—Spitalzeitung, "1863, No. 39. Veit, Frauenkrankheiten II, aufl. 1867, p. 544, "Winkel, Archiv. f. Gyn. B. II, p. 383—Kaltenbach—Archiv. f. Gyn., B. V., p. 138."

This paper throws no additional light upon the subject, and makes no mention of cysts, with calculous contents. As the main features of Schroeder's contribution have been made use of by Dr. Mundé (quoted above) it is unnecessary to enter into details, in their regard.

The only thing which has fallen under my observation, presenting any resemblance to the case of Mrs. S., is to be found in a back number of the "Archives Générales de Médecine," in which I discovered a notice of a thesis by Dr. Bourdillat, published in Paris, by Victor Masson, and entitled:

"Calculs de l'urètre et des régions circonvoisines chez l'homme et chez la femme." (18.) The reviewer of this thesis says: "A special paragraph is devoted to those calculi, which, "as in man, may be developed in the *neighborhood of the female urethra, and in particular in the vagina.*

(17) Italics mine. T. L.

(18) Archives Générales de Médecine, Juin, 1870, p. 764, Paris.

Unfortunately the reviewer enters into no details, and owing to the impossibility, for the present at least, of procuring a copy of Dr. Bourdillat's thesis, I am unable to ascertain whether or not that gentleman describes any case or cases which may be comparable with that of Mrs. S.

If nothing of the kind is to be found either in Dr. Bourdillat's monograph, or in the memoir of Dr. Huguier, then gentlemen, as far as my reading goes, I believe that I now present for your inspection the first instance of a calculus obtained from a cyst of the vaginal wall, of which I am able to find a published record.

It is not probable that Van Swieten was acquainted with any similar case, else, he, with customary minuteness, would not have failed to transmit the same to posterity, but the stone exhibited to night affords another proof of the truth contained in his shrewd remark quoted above, and reproduced here, as the conclusion of this paper : "There is scarcely any part of "the body.....in which a calculus has not sometimes been found."

Note. Since the reading of the above paper, Prof. Logan has shown me a calculus extracted from the sub-lingual gland of an elderly lady.

The composition of this calculus is analogous to that of the one passed by Mrs. S., and furnishes a corroboration of the opinion expressed by Prof. Jones, in his letter, a copy of which is given above.

Dr. H. D. Schmidt, Pathologist of the Charity Hospital, has had the kindness to make a preliminary microscopical examination of the calculus presented by me to the Orleans Parish Medical Society, and he gives the following opinion as the result of such examination, reserving a more positive and detailed report, until such time, as a fine section of the stone can be made. Dr. Schmidt expresses himself as follows : "It is supposed that the entire mass is the remains of a racemose gland of the vagina, into the acini of which, the inorganic matter was deposited. The specimen examined appears to consist of a number of laminated round bodies, each enclosing a nucleus composed of small round elements, which seem to be the remains of glandular epithelial cells."



